IN THE CLAIMS:

Please amend claims 1, 5, and 6, as shown in the complete list of claims that is presented below.

Claim 1 (currently amended): A batch processing apparatus for creating desired output data based on arbitrary input data comprising:

a metadata acquisition section for acquiring from a predetermined memorizing section, metadata being defined as information concerning at least data item name, input, processing operation content, and output, as well as information previously stored in the memorizing section;

a data input section for inputting the input data based on a declaration process of the metadata acquired through the metadata acquisition section, the [[date]] data input section including a display monitor;

a processing section for creating the output data by processing the input data input through the data input section, based on the declaration process of the metadata acquired through the metadata acquisition section; and

a data output section for outputting the output data created by the processing section, based on the declaration process of the metadata acquired through the metadata acquisition section,

wherein the processing section includes a summary operation processing section for performing a summary operation process produced in a case of creation of summary data, a specific operation processing section for performing a specific operation process produced in a case of creation of specific data, a group operation processing section for performing a group operation process, defined as a group calculation with respect to a parent-child relationship existing in the input data, and a time-series operation processing section for performing a time-series operation process for updating time-series data,

wherein the processing section newly produces information indicating a process flow of a batch process necessary to create objective output data, information indicating a content of intermediate data created at each process, and information concerning a link between the input and output data at each process as metadata upon process execution to register in the memorizing section, where the metadata previously registered in the memorizing section are

~~developed into~~ stored in a predetermined memory, where the output data created by both or either of the summary operation process and the specification operation process are used as input data of the group operation process for each of business service unit, processing cycle, management unit, and specification/summary classification, where the output data created by the group operation process is used as input data of the time-series operation process, and where both or either of the summary operation process and the specific operation process, the group operation process, and the time-series operation process are formed into a serial process flow, and

wherein the processing section starts both or either of the summary operating processing section and the specific operation processing section based on an execution sequence of each process according to the executing process defined by the metadata upon the process execution registered in the memorizing section, to its running timing, and to the process flow to execute each process, and, where both or either of the group operation metadata and the time-series operation metadata exists, the processing section starts each process to execute both or either of the group operation processing section and the time-series operation processing section by using output data created at the other processing section as input data and thereby to produce the objective output data.

Claim 2 (cancelled).

Claim 3 (previously presented): The batch processing apparatus according to claim 1, wherein the metadata expresses a data item of the input data, a format of the input data, a category expressed with a code in a case of the data item having the code, a category hierarchy configured with a combination of the categories, a data item of the output data, a format of the output data, a management unit for expressing an output unit of the output data with the data item as a factor, an extraction condition expression expressed with data item of the input data as a factor, a derivation operation expression for expressing the output data derived based on the data item of the input data, a code conversion content and a code conversion method for converting a value of the data item of the input data into a code of the output data, the data item of the input data and a calculation method for identifying the parent-child relationship for the group operation on the parent-child relationship, a term indicating comparison with a time

point expressed as a factor of the data item name of the output data to be output in the time-series operation, and/or a method for correcting past time-series in a case of the input data being past correction data.

Claim 4 (previously presented): The batch processing apparatus according to claim 1, wherein the metadata express at least one of a process flow of the batch process, a content of intermediate data created in each process, and a link between the input data and the output data in each process.

Claim 5 (currently amended): A batch processing method for creating desired output data based on arbitrary input data comprising:

a metadata acquisition step for using a metadata acquisition section to acquire metadata from a predetermined memorizing section, metadata being defined as information concerning at least data item name, input, a processing operation content, and output, as well as information previously stored in the memorizing section;

a data input step for using a data input section to input the input data based on a declaration process of the metadata acquired at the metadata acquisition step, the data input section including a display monitor;

a processing step for using a processing section to create the output data by processing the input data input at the data input step, based on the declaration process of the metadata acquired at the metadata acquisition step; and

a data output step for using a data output section to output the output data created at the processing step, based on the declaration process of the metadata acquired at the metadata acquisition step,

wherein in the processing step, the processing section includes a summary operation processing step for rendering a summary operation processing section perform a summary operation process produced in a case of creation of summary data, a specific operation processing step for rendering a specific operation processing section perform a specific operation process produced in a case of creation of specific data, a group operation processing step for rendering a group operation processing section perform a group operation process, defined as a group calculation with respect to a parent-child relationship existing in the input

data, and a time-series operation processing step for executing a time-series operation process for updating time-series data via a time-series operation processing section,

wherein in the processing step, the processing section newly produces information indicating a process flow of the batch process necessary to create objective output data, information indicating a content of the intermediate data created at each process, and information concerning a link between the input and output data at each process as metadata upon process execution to register in the memorizing section, where the metadata previously registered in the memorizing section are ~~developed into~~ stored in a predetermined memory, where the output data created by both or either of the summary operation process and the specification operation process are used as input data of the group operation process for each of business service unit, processing cycle, management unit, and specification/summary classification, where the output data created by the group operation process is used as input data of the time-series operation process, and where both or either of the summary operation process and the specific operation process, the group operation process, and the time-series operation process are formed into a serial process flow, and

wherein in the processing step, the processing section starts both or either of the summary operating processing section and the specific operation processing section based on an execution sequence of each process according to the executing process defined by the metadata upon the process execution registered in the memorizing section, to its running timing, and to the process flow to execute each process, and, where both or either of the group operation metadata and the time-series operation metadata exists, the processing section starts each process to execute both or either of the group operation processing section and the time-series operation processing section by using output data created at the other processing section as input data and thereby to produce the objective output data.

Claim 6 (currently amended): A non-transitory computer-readable storage medium that stores a set of instructions for a batch processing program which, when executed by a computer, performs a method for creating desired output data based on arbitrary input data, said method comprising:

a metadata acquisition process for using a metadata acquisition section to acquire from a predetermined memorizing section, metadata defined as information concerning at least data

item name, input, a processing operation content, and output, as well as information previously stored in the memorizing section;

a data input process for using a data input section to input the input data based on a declaration process of the metadata acquired in the metadata acquisition process;

a processing process for using a processing section to create the output data by processing the input data input in the data input process, based on the declaration process of the metadata acquired in the metadata acquisition process; and

a data output process for using a data output section to output the output data created in the processing process, based on the declaration process of the metadata acquired in the metadata acquisition process,

wherein the processing section functions as a summary operation processing section for performing a summary operation process produced in a case of creation of summary data, a specific operation processing section for performing a specific operation process produced in a case of creation of specific data, a group operation processing section for performing a group operation process, defined as a group calculation with respect to a parent-child relationship existing in the input data, and a time-series operation processing section for performing a time-series operation process for updating time-series data,

wherein the processing section newly produces information indicating a process flow of the batch process necessary to create objective output data, information indicating a content of intermediate data created at each process, and information concerning a link between the input and output data at each process as metadata upon process execution to register in the memorizing section, where the metadata previously registered in the memorizing section are ~~developed into~~ stored in a predetermined memory, where the output data created by both or either of the summary operation process and the specification operation process are used as input data of the group operation process for each of business service unit, processing cycle, management unit, and specification/summary classification, where the output data created by the group operation process is used as input data of the time-series operation process, and where both or either of the summary operation process and the specific operation process, the group operation process, and the time-series operation process are formed into a serial process flow, and

wherein the processing section starts both or either of the summary operating processing section and the specific operation processing section based on an execution sequence of each process according to the executing process defined by the metadata upon the process execution registered in the memorizing section, to its running timing, and to the process flow to execute each process, and, where both or either of the group operation metadata and the time-series operation metadata exists, the processing section starts each process to execute both or either of the group operation processing section and the time-series operation processing section by using output data created at the other processing section as input data and thereby to produce the objective output data.

Claim 7 (cancelled).

Claim 8 (previously presented): The batch processing apparatus according to claim 4, wherein the metadata expresses a data item of the input data, a format of the input data, a category expressed with a code in a case of the data item having the code, a category hierarchy configured with a combination of the categories, a data item of the output data, a format of the output data, a management unit for expressing an output unit of the output data with the data item as a factor, an extraction condition expression expressed with data item of the input data as a factor, a derivation operation expression for expressing the output data derived based on the data item of the input data, a code conversion content and a code conversion method for converting a value of the data item of the input data into a code of the output data, the data item of the input data and a calculation method for identifying the parent-child relationship for the group operation on the parent-child relationship, a term indicating comparison with a time point expressed as a factor of the data item name of the output data to be output in the time-series operation, and/or a method for correcting past time-series in a case of the input data being past correction data.

Claim 9 (previously presented): The batch processing apparatus according to claim 4, wherein the metadata express at least one of a process flow of the batch process, a content of intermediate data created in each process, and a link between the input data and the output data in each process.